REMARKS/ARGUMENTS

This paper is being provided in response to the Final Office Action dated June 3, 2008, for the above-referenced application. In this response, Applicants have amended claims 1, 22 and 41 to clarify that which Applicants consider to be the presently-claimed invention. Applicants respectfully submit that the claim amendments are fully supported by the originally filed application.

The objection to claims 1, 22 and 41 for informalities has been addressed by amendments contained herein in accordance with the guidelines set forth in the Office Action. Accordingly, Applicants respectfully request that the objection be reconsidered and withdrawn.

The rejection of Claims 1, 3-7, 22, 24-28, 41, 44-52, 63-66, and 71 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,928,555 to Drew (hereinafter "Drew") in view of U.S. Patent No. 6,094,731 to Waldin, et al. (hereinafter "Waldin") is hereby traversed and reconsideration thereof is respectfully requested in view of the amendments to the claims contained herein.

Independent claim 1, as amended herein, recites a computer implemented method of scanning a storage device for viruses, comprising: determining, by the storage device, each track of the storage device that has been accessed for a write operation since a previous virus scan using information about tracks of the storage device without using file-based information, the file-based information including information about file structure, file system, and file type; providing, to an antivirus unit by the storage device, information indicating which tracks of the storage device have been accessed for a write operation since the previous virus scan; and

scanning, by the antivirus unit using the information provided by the storage device, at least a portion of each track identified as having been accessed for a write operation since the previous virus scan for viruses, wherein scanning is performed without using the file-based information. Claims 3-7, 63 and 66-70 depend from independent claim 1.

Independent claim 22, as amended herein, recites a computer program product for scanning a storage device for viruses, the computer program product including a computer-readable medium with executable code stored thereon for: determining, by the storage device, each track of the storage device that has been accessed for a write operation since a previous virus scan using information about tracks of the storage device without using file-based information, the file-based information including information about file structure, file system, and file type; providing, to an antivirus unit by the storage device, information indicating which tracks of the storage device have been accessed for a write operation since the previous virus scan; and scanning, by the antivirus unit using the information provided by the storage device, at least a portion of each track identified as having been accessed for a write operation since the previous virus scan for viruses, wherein scanning is performed without using the file-based information. Claims 23-28, and 64 depend from independent claim 22.

Independent claim 41, as amended herein, recites an antivirus unit, comprising: means for coupling to at least one storage device; means for determining each track of the storage device that has been accessed for a write operation since a previous virus scan using information about tracks of the storage device without using file-based information, the file-based information including information about file structure, file system, and file type; means for receiving, from the at least one storage device, information determined by the at least one storage device

indicating which tracks of the at least one storage device have been accessed for a write operation since the previous virus scan; and means for scanning, using the information provided by the storage device, at least a portion of each track identified as having been accessed for a write operation since the previous virus scan for viruses, wherein scanning is performed without using the file-based information. Claims 43-52, 65 and 71 depend from Claim 41.

The Drew reference discloses a method and apparatus for minimizing file scanning by anti-virus programs. Col. 3, lines 40-55 and col. 4, lines 5-25 of Drew are cited by the Office Action as support for disclosing determining, by a storage device, each track of the storage device that has been accessed for a write operation since a previous scan using information about tracks of the storage device; providing to an antivirus unit by the storage device information indicating which tracks of the storage device have been accessed for a write operation since the previous scan; and scanning, by the antivirus unit using the information provided by the storage device, at least a portion of each track identified as having been accessed for a write operation since the previous scan for viruses. Col. 3, lines 40-55 of Drew refer to steps of the flowchart of Drew's Figure 2 with respect to processing performed with reference to Figure 1 in which an antivirus program is included in the network server computer 4. Col. 4, lines 5-25 of Drew disclose additional steps concerning determining whether a file was actually written that is modified by the user performing some writing step on the open file. The Office Action states that Drew is silent on the determining step being performed without using information about a file structure, a file system or a file type and performing scanning without using information about a file structure, a file system or a file system.

The Waldin reference discloses a system, method and computer readable medium for examining a file associated with an originating computer to determine whether a virus is present within the file. Waldin discloses scanning and hashing file sectors and placing into a critical sectors file the identification (e.g., number) of each sector that is scanned. (See, for example, Abstract of Waldin). The Office Action cites to Waldin as disclosing determining and scanning steps using information about physical portions without using information about a file structure, a file system or a file type, citing to col. 2, lines 57-64, col. 6, lines 37-47, col. 3, lines 5-45, and col. 7, line 36 - col. 8, line 8 of Waldin.

Applicants' independent claims, as amended herein, recite a computer-implemented method, computer-program product and antivirus unit that include at least the features of determining, by the storage device, each track of the storage device that has been accessed for a write operation since a previous virus scan using information about tracks of the storage device without using file-based information, the file-based information including information about file structure, file system, and file type. Further, Applicants' independent claims also recite at least the features of scanning, using the information provided by the storage device, at least a portion of each track identified as having been accessed for a write operation since the previous virus scan for viruses, wherein scanning is performed without using the file-based information. Applicants refer, for example, to page 18, line 7 to page 19, line 11 of the originally-filed specification in which Applicants discuss advantages of not requiring knowledge of file-based information in connection with the recited processing.

Applicants respectfully submit that neither Drew nor Waldin, taken alone or in any combination, teach or fairly suggest at least the above-noted features as recited in the amended

independent claims. The Office Action states that Drew is silent concerning the above-noted features (see page 4 of the Office Action) and cites to Waldin as disclosing determining and scanning steps "without using information about a file structure, a file system or a file type." Applicants have clarified with amendments herein the recited features of determining and scanning steps, as noted above, as being performed without using file-based information, the file-based information, as recited by Applicants, including information about file structure, file system and file type. Accordingly, Applicants recited features indicate that neither file structure information, file system information nor file type information is used in the above-noted determining and scanning steps. As set forth in detail below, Applicants respectfully submit that Waldin discloses the use of file-based information, such as at least the use of file structure information and/or file system information.

Specifically, Waldin discloses scanning file sectors and comparing hash values for the file sectors to determine if there have been changes to the file. As noted above, the Office Action cites to col. 2, lines 57-64, col. 6, lines 37-47, col. 3, lines 5-45 and col. 7, line 37 - col. 8, line 8 of Waldin in relation to Applicants' recited features, and Applicants note that these portions of Waldin appear to disclose hashing, parsing and scanning techniques that do not require additional programming every time a new virus hosting file format is released. (See, for example, col. 3, lines 41-43 of Waldin). However, Applicants' respectfully submit that although Waldin's techniques may not rely on particular file formats, the disclosed techniques still involve hashing, parsing and scanning of file sectors that appear to require the use of file-based information. That is, even if Waldin's techniques are independent of file format, which may perhaps be akin to file type, Waldin's techniques still require the use of file-based information, such as file structure information and/or file system information, in order to be appropriately

used with respect to the file sectors discussed by Waldin. For example, at col. 4, lines 52-54, Waldin discloses "During the scanning of file 1, module 5 places into critical sectors file 4 the identification (e.g., number) of each of the sectors that is scanned (step 23)" and at col. 6, lines 37-47 of Waldin (that is cited by the Office Action), Waldin discloses determination of file sectors that have been previously scanned according to sizes, dates and version numbers of files.

Accordingly, Applicants submit that Waldin discloses the use of file-based information that includes at least information about file structure and/or file system and, thus, neither Waldin nor Drew teach or fairly suggest at least the features of performing the above-noted determination and scanning steps without using file-based information, the file-based information including information about file structure, file system and file type, as recited by Applicants. In view of the above, Applicants respectfully request that the rejections be reconsidered and withdrawn.

Based on the above, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8604.

Respectfully submitted,
MUIRHEAD AND SATURNELLI, LLC

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Eric E. Cole Reg. No. 47,499

for Anne E. Saturnelli
Registration No. 41,290

MUIRHEAD AND SATURNELLI, LLC
200 Friberg Parkway, Suite 1001
Westborough, MA 01581
Tel: (508) 898-8604
Fax: (508) 898-8602